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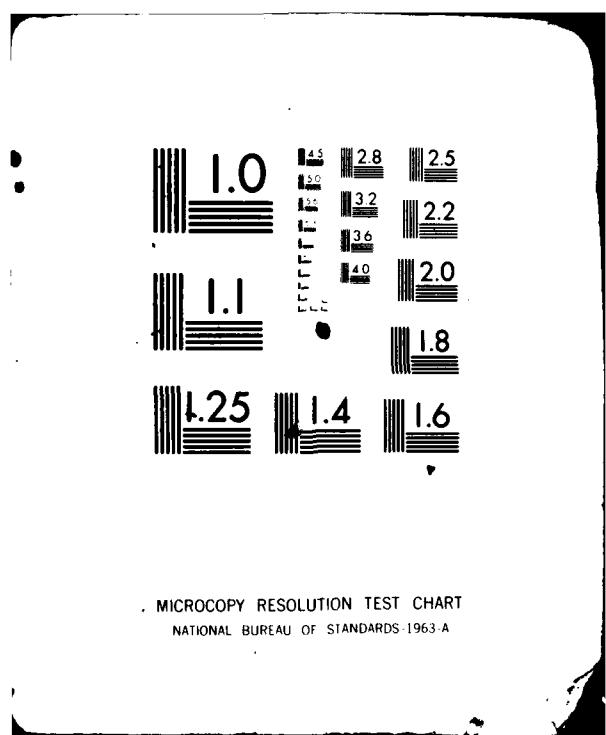
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Impaction of First Permanent Molars
Case Report

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INTRODUCTORY SUMMARY

Occasionally, the extraction of an impacted tooth provides a clinical challenge for an oral surgeon. Any tooth may be impacted, but third molars and maxillary cuspids are most frequently encountered followed by premolars and supernumerary teeth. Various surveys have reported the rate and frequency of impacted teeth. Impactions can occur because of malpositioning of the tooth bud or obstruction in the path of eruption. Two unusual cases of impacted permanent first molars are described. The importance of panoramic radiographs in the identification of such anomalously placed teeth is stressed.

INTRODUCTION:

A review of the literature revealed few cases of impacted molar teeth other than third molars.¹⁻⁴ It has also been pointed out that frequency with which certain teeth become impacted follows a fairly constant order. The order of frequency of impactions, other than third molars, are premolars, maxillary cuspids and maxillary incisors.⁵ Impaction of first and second molars is also reported as very uncommon.⁶

In a radiographic survey of 5,000 U.S. Army recruits, it was found that a recruit, age 17-26, had an average of 2.28 unerupted/impacted teeth.¹ No case of identified mandibular first molar impaction was seen during the survey. The frequency of unerupted/impacted teeth were maxillary third molar, mandibular third molar, maxillary cuspid, mandibular first bicuspid, mandibular second bicuspid, mandibular cuspid, maxillary fourth molar, maxillary first and second bicuspid, maxillary second molar, mandibular second molar and fourth molar, maxillary central incisor and maxillary lateral incisor and maxillary first molar. Impacted mandibular central incisors and mandibular first molars were not seen in the population surveyed. Dachi⁴ reported three cases of impacted mandibular first and eight cases of impacted mandibular second molars in a survey of 3,874 radiographs.

This report describes two isolated cases of impacted maxillary and mandibular first permanent molars.

Report of Case: A twenty-two-year-old male came in the clinic to seek treatment for a toothache. He had never received dental treatment of any kind previously. A panoramic radiograph (Fig 1) revealed mandibular first molar residual roots and carious mandibular right second molar. Interestingly, an ectopically placed maxillary first molar was noticed extruding in the maxillary antrum. A well circumscribed, radiopaque mass is evident in the

normal path of eruption that might have prevented its normal eruption from occurring. His medical history was noncontributory. There were no clinical signs or symptoms of sinusitis. Surgical removal of the impacted molar along with radiopaque mass was recommended.

Case II. A 24-year-old male patient sought treatment for discomfort during chewing on the left lower side of the jaw. A clinical examination revealed deep pocketing and moderate gingivitis. The pocket depth was found to be more than 10 mm. on the mesial side of the second molar. Prior history of multiple extractions suggested that all first molars were probably extracted. A panoramic radiograph revealed an unusual impacted mandibular left molar. Its size, shape and location suggests the first molar. No definite etiology could be established. Surgical removal of the impacted tooth was recommended.

DISCUSSION

Impaction can occur because of malpositioning of the tooth bud or obstruction at the peak of eruption. However, the exact mechanism is still unknown. Mead² believed that a delay in eruption was responsible for impacted teeth. In one survey,¹ although no instance of impacted mandibular incisors or first molars were seen, the possibility does exist for any tooth being affected. The third molars and all cuspids, because they erupt last in their respective arches, are prone to be impacted. Unlike the third molars, both maxillary and mandibular first and second molars are rarely impacted.⁶ Local pathoses generally is the sole responsibility for the impaction.

The need to account for a missing tooth, after a clinical examination, should be investigated by radiographic methods, especially panoramic radiographs, to exclude the possibility of an undiagnosed malposed impacted tooth.

Also, an undiagnosed intrusion of teeth into the surrounding structures, as a result of trauma, should be investigated before it may complicate the treatment planning. If such teeth are not removed early enough, localized pathosis may precipitate at a later date. Studies^{7,8} have pointed out that there is a potential danger of various pathological conditions associated with impacted teeth.

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Figure I Panoramic radiograph showing impacted maxillary left first molar. Presence of odontoma in the path of eruption is evident.

Figure II Panoramic radiograph showing impacted or entrapped mandibular left first molar.



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